WHAT IS CLAIMED IS

1. A gas separator for separating a specific gas from a mixed gas, comprising:

an outer casing;

a rotating body disposed inside the casing; and

a drive means mounted to the casing and adapted to drive the rotating body to be rotatable,

said rotating body being formed with first and second flow paths formed independently from each other, said first flow path being provided with a gas absorption/releasing material for absorbing and releasing a specific gas from a mixed gas depending on different temperature zones, wherein fluids of different temperatures depending on a rotating position of said rotating body are fed through said second flow path, a heat is transmitted between the first and the second flow paths, and the specific gas is absorbed and released by changing the temperature of the gas absorption/releasing material in accordance with the rotating position of the rotating body.

2. A gas separator according to claim 1, wherein the rotating body is composed of a plurality of fan-shaped hollow blocks arranged in a circumferential direction thereof and the gas absorption/releasing material for absorbing and releasing the specific gas from the mixed gas

depending on different temperature zones is provided on an inner surface of each of the blocks.

3. A gas separator according to claim 1, wherein the rotating body is provided with a hollow static portion at a rotational central portion thereof.

4. A gas separator according to claim 3, wherein said static portion is divided into two sections in the circumferential direction thereof so as to form introduction paths for introducing fluids of different temperatures and a plurality of supply paths are formed among a plurality of the blocks by disposing sealing portions between the static portion and the rotating body and between the rotating body and the casing so as to divide the supply paths into two sections, and the supply paths divided into two sections are communicated with the introduction paths divided into two sections so as to form the second flow path.

5. A gas separator according to claim 1, wherein said rotating body takes a plurality of rotating positions, the mixed gas is fed to said gas absorption/releasing material at a first rotating position of the rotating body while the specific gas is released from the gas absorption/releasing material at a second rotation position of the rotating

body, and blocking portions for blocking communication between the first rotating position and the second rotating position are provided in the casing.

6. A gas separator according to claim 4, wherein said blocks are divided into ones related to an absorption reaction of the specific gas and other ones related to a releasing reaction of the specific gas and said second flow path is divided by blocking portions so that the number of blocks related to one of the absorption reaction and the releasing reaction which takes a time longer than another one thereof is larger than the number of blocks related to another one thereof.

7. A gas separator according to claim 1, wherein either one of a honey-comb member and a fin member is provided in the first and second flow paths.

8. A gas separator according to claim 1, wherein said casing is provided with a supply port for supplying the mixed gas including the specific gas to the first flow path in the rotating body and a discharge port for releasing the mixed gas after the specific gas is absorbed.

9. A gas separator according to claim 1, wherein said casing is provided with a recovery port for recovering the

released mixed gas including the specific gas in a high concentration.

10. A gas separator according to claim 1, wherein the mixed gas is a gas containing a carbon dioxide while the specific gas is a carbon dioxide and the gas absorption/releasing material reacts with the carbon dioxide so as to generate a lithium carbonate thereby to absorb the carbon dioxide and releases the carbon dioxide by decomposing the lithium carbonate.

11. A gas separator according to claim 1, wherein a temperature necessary for performing the absorption reaction of the carbon dioxide is approximately 500°C while a temperature necessary for performing the release reaction of the carbon dioxide is over approximately 700°C.

12. A gas separator for separating a specific gas from a mixed gas, comprising:

an outer casing;

a rotating body disposed inside the casing; and

a drive means mounted to the casing and adapted to drive the rotating body to be rotatable,

said rotating body being formed with first and second flow paths are independently from each other, said first flow path being provided with a gas absorption/

releasing material for absorbing and releasing a specific gas from a mixed gas depending on different temperature zones, wherein said rotating body takes a plurality of rotating positions including first and second rotating positions, the mixed gas set to a temperature zone necessary for performing an absorption reaction of the specific gas is fed at the first rotating position of the rotating body while a fluid of a temperature necessary for performing a release reaction of the specific gas is fed at the second rotating position of the rotating body, a heat is transmitted between the first and second flow paths and the specific gas is absorbed and released by changing the temperature of the gas absorption/releasing material in accordance with the rotating positions of the rotating body.

13. A gas separator according to claim 12, wherein said rotating body is composed of a plurality of fan-shaped hollow blocks arranged in the circumferential direction thereof and said rotating body has a central portion formed as a hollow static portion, from which a fluid of a temperature necessary for performing a release reaction of the specific gas is introduced, and supply paths are formed between the blocks so as to be communicated with the static portion thereby to form the second flow path.

14. A gas separator according to claim 12, wherein the mixed gas is a gas containing a carbon dioxide while the specific gas is a carbon dioxide and the gas absorption/releasing material reacts with the carbon dioxide so as to generate a lithium carbonate thereby to absorb the carbon dioxide and releases the carbon dioxide by decomposing the lithium carbonate.

15. A gas separator according to claim 12, wherein a temperature necessary for performing the absorption reaction of the carbon dioxide is approximately 500°C while a temperature necessary for performing the release reaction of the carbon dioxide is over approximately 700°C.

16. A gas separator for separating a specific gas from a mixed gas, comprising:

an outer casing;

a rotating body disposed inside the casing; and

a drive means mounted to the casing and adapted to drive the rotating body to be rotatable,

said rotating body being provided with a gas absorption/releasing material for absorbing and releasing a specific gas depending on different temperature zones, wherein a flow path for feeding a fluid for changing the temperature of the gas absorption/releasing material depending on a rotating position of the rotating body is

provided so as to absorb and release a specific gas based on a rotating position of the rotating body.

17. A gas separator according to claim 16, wherein the mixed gas is a gas containing a carbon dioxide while the specific gas is a carbon dioxide and the gas absorption/releasing material reacts with the carbon dioxide so as to generate a lithium carbonate thereby to absorb the carbon dioxide and releases the carbon dioxide by decomposing the lithium carbonate.

18. A gas separator according to claim 16, wherein a temperature necessary for performing the absorption reaction of the carbon dioxide is approximately 500°C while a temperature necessary for performing the release reaction of the carbon dioxide is over approximately 700°C.

19. A gas separator for separating a specific gas from a mixed gas, comprising:

an outer casing;

a rotating body disposed inside the casing, said rotating body being composed of a plurality of fan-shaped blocks arranged in a circumferential direction thereof;

a drive means mounted to the casing and adapted to drive the rotating body to be rotatable in a predetermined direction;

a gas absorption/releasing material provided to the blocks and adapted to absorb and release a specific gas from a mixed gas depending on different temperature zones; and

a hollow static portion disposed at a central portion of the rotating body and having an inner hollow portion which is divided by a separation plate thereby to form two introducing paths through which temperature adjusting fluids having different temperatures pass,

said rotating body being formed with first and second flow paths formed independently from each other, said first flow path being provided with the gas absorption/releasing material, and wherein fluids of different temperatures depending on a rotating position of the rotating body are fed through said second flow path so that a heat is transmitted between the first and the second flow paths.

20. A gas separator for separating a specific gas from a mixed gas comprising:

an outer casing;

a rotating body disposed inside the casing;

a drive means mounted to the casing and adapted to drive the rotating body to be rotatable in a predetermined direction;

a gas absorption/releasing means provided on an

inner surface of said rotating body and adapted to absorb and release a specific gas depending on different temperature zones; and

a flow path means formed inside the rotating body for feeding a fluid thereinto, said flow path means being divided into a plurality of flow path sections by blocking portions so as to absorb and release the specific gas depending on a rotating position of the rotating body in accordance with a temperature of the fluid flowing the respective flow path sections.